LISTING OF CLAIMS

1. (Original) A process for checking the static currents of a direct conversion type of frequency transposition device which includes a transconductor block receiving the input signal and a current switching block connected to the output from the device, comprising:

servocontrolling at least a common mode static output current from the frequency transposition device to a current proportional to a reference current and independent of a static output current from the transconductor block.

2. (Currently Amended) The process according to claim 1, wherein the step of servocontrolling comprises servocontrolling a common mode input current to the current switching block to a current proportional to the reference current and independent of the static output current from the transconductor block.

3. (Currently Amended) The process according to claim 2, wherein the input current to the current switching block is a differential current, and wherein the static output current from the transconductor block is a differential current, further comprising:

servocontrolling a difference between the differential input currents to the current switching block to zero by making a differential comparison ~~check~~ of the differential static output currents from the transconductor block.

4. (Currently Amended) The process according to claim 1, wherein the step of servocontrolling comprises servocontrolling the common mode static output current from the frequency transposition device directly to the ~~said~~ current proportional to the reference current and independent of static output current from the transconductor block.

5. (Currently Amended) The process according to claim 4, wherein the static output current from the transconductor block is a differential current, further comprising:

servocontrolling a difference between the static output currents from the frequency transposition device to zero by making a differential comparison ~~check~~ of the static output currents from the transconductor block.

6. (Currently Amended) The process according to claim 1, further including servocontrolling the static output current to a current proportional to the reference current and independent of the static output current from the transconductor block by servocontrolling each input current to the current switching block onto a current proportional to the reference current and independent of the static output current from the transconductor block.

7. (Currently Amended) A direct conversion type of frequency transposition device, comprising:

a transconductor block receiving an input signal;

a current switching block connected to an output from the device; and

a servocontroller operable to servocontrol at least a common mode of a static output current from the frequency transposition device to a current proportional to a reference current and independent of a static output current from the transconductor block.

8. (Original) The device according to claim 7, wherein the servocontroller operates to servocontrol a common mode input current to the current switching block to a current proportional to the reference current and independent of the static output current from the transconductor block.

9. (Currently Amended) The device according to claim 8, wherein the servocontroller comprises:

a current source generating the reference current on its output terminal which is connected to a current switching block input; and

a ~~single~~ first differential current amplifier having a first input connected to the output terminal from the current source, a second input connected to the current switching block input and to the transconductor block output, and an output connected to the transconductor block output.

10. (Currently Amended) The device according to claim 9, the servocontroller further comprising a second differential current amplifier having inputs connected to the ~~between~~ differential transconductor block outputs and an output connected to a means for polarizing this transconductor block so as to servocontrol a difference between differential input currents to the current switching block to zero by making a differential control of static output currents from the transconductor block.

11. (Currently Amended) The device according to claim 7, wherein the servocontroller directly servocontrols common mode static output current from the frequency transposition device to the ~~said~~ current proportional to the reference current and independent of the static output current from the transconductor block.

12. (Currently Amended) The device according to claim 11, wherein the servocontroller comprises:

a current source generating the ~~said~~ reference current on its output terminal connected to a current switching block input; and

a ~~single~~ differential current amplifier having a first input connected to the output terminal from the current source, a second input connected to the current switching block output and an output connected to the transconductor block output.

13. (Currently Amended) The device according to claim 12, the servocontroller further comprising a second differential current amplifier having inputs connected to the ~~between~~ differential transconductor block outputs and an output connected to a means for polarizing ~~polarising~~ this transconductor block so as to servocontrol a difference between differential static output currents from the frequency transposition device to zero by making a differential control of static output currents from the transconductor block.

14. (Original) The device according to claim 8, wherein the servocontroller further operates to servocontrol each input current to the current switching block to a current proportional to the reference current and independent of the static output current from the transconductor block.

15. (Currently Amended) The device according to claim 14, wherein the servocontroller comprises:

a current source generating the ~~said~~ reference current on its output terminal connected to the current switching block input;

a first differential current amplifier that has a first input connected to the output terminal from the current source, an output connected to a first input to the current switching block and to a first output from the transconductor block, and the output being looped back to a second input of the first amplifier; and

a second differential current amplifier that has a first input connected to the output terminal from the current source, an output connected to a second input of the current switching

block and to a second output from the transconductor block and the output being looped back to a second input of the second amplifier.

16. (Original) The device according to claim 7 as fabricated in the form of an integrated circuit.

17. (Original) A wireless communication system terminal which includes a direct conversion type of frequency transposition device, the device comprising:

a transconductor block receiving an input signal;

a current switching block connected to an output from the device; and

a servocontroller operable servocontrol at least a common mode of a static output current from the frequency transposition device to a current proportional to a reference current and independent of a static output current from the transconductor block.

18. (Original) The terminal according to claim 17, wherein the terminal is a mobile cell phone.

19. (Original) The terminal according to claim 17, wherein the servocontroller operates to servocontrol a common mode input current to the current switching block to a current proportional to the reference current and independent of the static output current from the transconductor block.

20. (Currently Amended) The terminal according to claim 19, wherein the servocontroller comprises:

a current source generating the reference current on its output terminal which is connected to a current switching block input; and

a ~~single~~ first differential current amplifier having a first input connected to the output terminal from the current source, a second input connected to the current switching block input

and to the transconductor block output, and an output connected to the transconductor block output.

21. (Currently Amended) The terminal according to claim 20, the servocontroller further comprising a second differential current amplifier having inputs connected to the ~~between~~ differential transconductor block outputs and output connected to a means for polarizing this transconductor block so as to servocontrol a difference between differential input currents to the current switching block to zero by making a differential control of static output currents from the transconductor block.

22. (Currently Amended) The terminal according to claim 18, wherein the servocontroller directly servocontrols common mode static output current from the frequency transposition device to the ~~said~~ current proportional to the reference current and independent of the static output current from the transconductor block.

23. (Currently Amended) The terminal according to claim 22, wherein the servocontroller comprises:

a current source generating the ~~said~~ reference current on its output terminal connected to a current switching block input; and

a ~~single~~ first differential current amplifier having a first input connected to the output terminal from the current source, a second input connected to the current switching block output and an output connected to the transconductor block output.

24. (Currently Amended) The terminal according to claim 23, the servocontroller further comprising a second differential current amplifier having inputs connected to the ~~between~~ differential transconductor block outputs and an output connected to a means for polarising this transconductor block so as to servocontrol a difference between differential static output currents from the frequency transposition device to zero by making a differential control of static output currents from the transconductor block.

25. (Original) The terminal according to claim 19, wherein the servocontroller further operates to servocontrol each input current to the current switching block to a current proportional to the reference current and independent of the static output current from the transconductor block.

26. (Currently Amended) The terminal according to claim 25, wherein the servocontroller comprises:

a current source generating the ~~said~~ reference current on its output terminal connected to the current switching block input;

a first differential current amplifier that has a first input connected to the output terminal from the current source, an output connected to a first input to the current switching block and to a first output from the transconductor block, and the output being looped back to a second input of the first amplifier; and

a second differential current amplifier that has a first input connected to the output terminal from the current source, an output connected to a second input of the current switching block and to a second output from the transconductor block and the output being looped back to a second input of the second amplifier.

27. (Currently Amended) A direct conversion frequency transposition device, comprising:

an input;

a radio frequency stage connected to the input;

a current switching stage connected to ~~the radio frequency stage;~~ an output ~~connected to the current switching stage~~; and

a servocontroller coupled between the radio frequency stage and the current switching stage and operable to control standby currents in the ~~radio frequency stage and~~ current switching stage independently of standby currents in the radio frequency stage ~~each other~~.

28. (Original) The device of claim 27 wherein the radio frequency stage is a transconductor.

29. (Currently Amended) The device of claim 27 wherein the standby currents of the radio frequency stage and current switching stage ~~which are servocontrolled~~ are standby output currents.

30. (Original) The device of claim 29 wherein the standby output currents are directly servocontrolled.

31. (Currently Amended) The device of claim 27 ~~30~~ wherein the servocontroller operates to servocontrol the standby output current of the current switching stage directly to a current proportional to a reference current and independent of a ~~the~~ standby output current of the radio frequency stage.

32. (Currently Amended) The device of claim 31 wherein a difference between differential standby output currents of the current switching stage is servocontrolled to zero by differentially comparing ~~checking~~ standby output currents of the radio frequency stage.

33. (Original) The device of claim 29 wherein the standby output currents are indirectly servocontrolled.

34. (Currently Amended) The device of claim 27 ~~33~~ wherein the servocontroller operates to servocontrol input current to the current switching stage to a current proportional to a reference current and independent of a ~~the~~ standby output current of the radio frequency stage.

35. (Currently Amended) The device of claim 34 wherein a difference between differential input currents to the current switching stage is servocontrolled to zero by differentially comparing ~~checking~~ standby output currents of the radio frequency stage.

36. (New) A circuit, comprising:

a differential transconductance stage including a differential voltage input and a differential current output at a first and second node;

a differential current switching stage including a differential current input at a third and fourth node and a differential output at a fifth and sixth node; and

a servocontroller stage coupled between the differential transconductance stage and the differential current switching stage, the servocontroller stage including a first resistance between the first and third node and a second resistance between the second and fourth node, the servocontroller stage operating to servocontrol currents flowing through the first and second resistances to be proportional to a reference current and independent of the differential current output from the differential transconductance stage.

37. (New) The circuit of claim 36 wherein the servocontroller stage further comprises:

a first differential amplifier including a first input coupled to the reference current and a second input coupled to an output of the first differential amplifier, the first differential amplifier output being coupled to the first node; and

a second differential amplifier including a first input coupled to the reference current and a second input coupled to an output of the second differential amplifier, the second differential amplifier output being coupled to the second node.

38. (New) The circuit of claim 37 further comprising a third resistance coupled between the first input of the first differential amplifier and the third node and a fourth resistance coupled between the first input of the second differential amplifier and the fourth node.

39. (New) The circuit of claim 36 wherein the servocontroller stage further comprises:

a differential amplifier including a first input coupled to the reference current and a second input coupled through third and fourth resistances to the first and second nodes, respectively, and wherein an output of the differential amplifier is coupled through fifth and sixth resistances to the first and second nodes, respectively.

40. (New) The circuit of claim 36 wherein the servocontroller stage further comprises:

a differential amplifier including a first input coupled to the reference current and a second input coupled through third and fourth resistances to the fifth and sixth nodes, respectively, and wherein an output of the differential amplifier is coupled through fifth and sixth resistances to the first and second nodes, respectively.